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Title: (U) Archiving Physics Data for Today and Tomorrow

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Welcome to Physics Café

Mike Ham, P-2:

(U) Archiving Physics Data for Today and Tomorrow

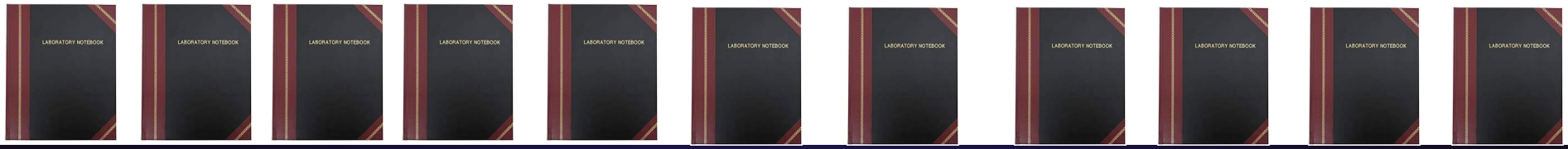
April 15, 2021

My Data Background

Project	Types of Data Collected / Accessible to community	Status of Data
Legos	Mental / No	Still in use
UNT Liquid Nitrogen Car	Notebooks / No	Discarded during a move
UNT Accelerator Laboratory	Notebooks / No	Publications
UNT Neurophysiology Laboratory / LANL T Division	1. Notebooks / No 2. Electronic Database / No 3. Electronic data files / No 4. Electronic Documents / Only Published	1. Publications 2. Removable hard drives that maybe work (13 years)
LANL Computer Vision	1. Notebooks / Yes 2. Myriad of computer programs and data files / No 3. Electronic Documents / Only Published	1. Notebooks in my office 2. Computer programs may exist on a thumb drive 3. Publications 4. Data likely inaccessible (computer lockout)
LANL Reaction History	1. Notebooks / Yes 2. Electronic Documents / Yes 3. Scanned Repository / Yes	1. X Online Vault 2. Red Repository 3. SSDB 4. Common Modeling Framework

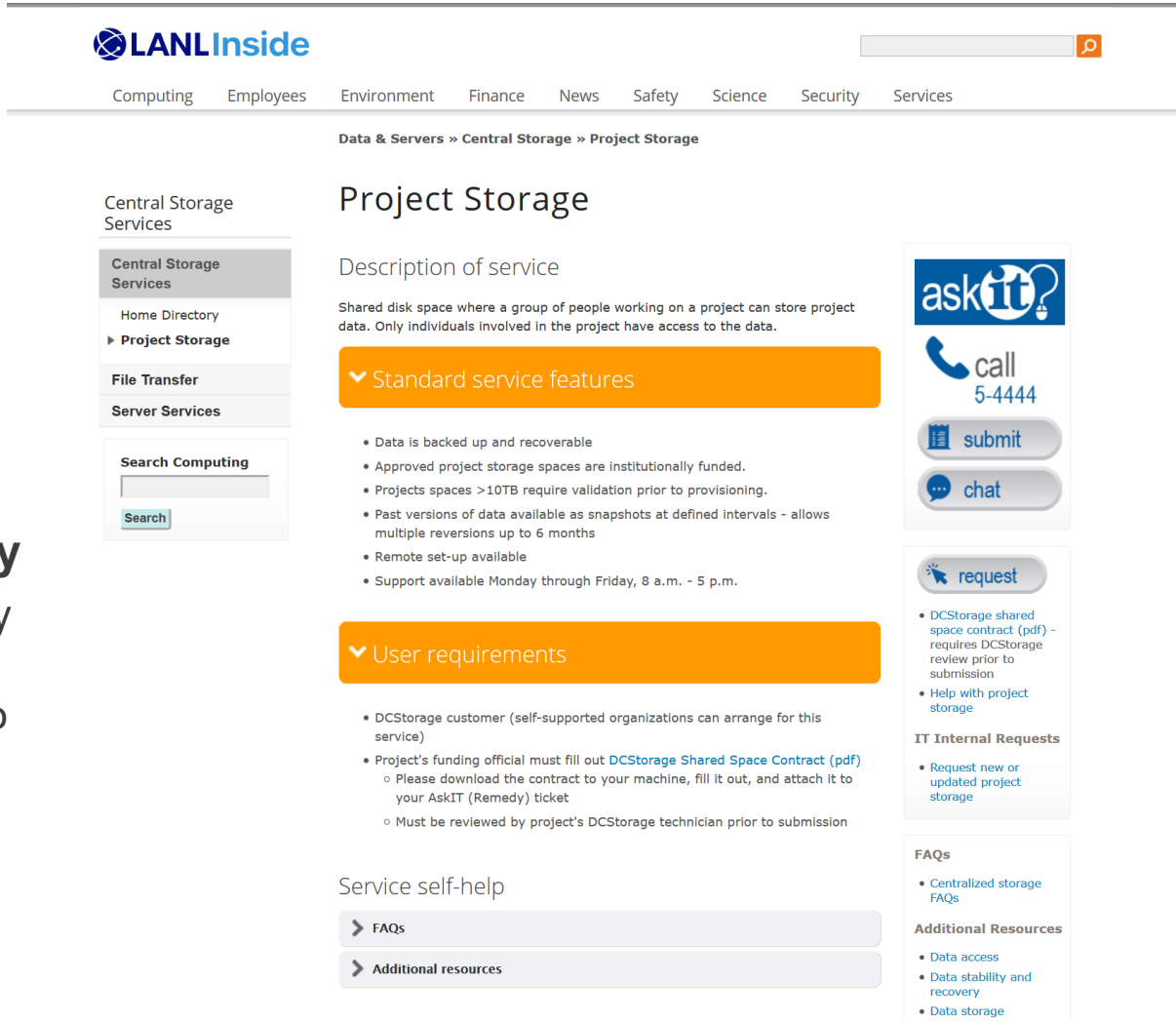
LANL did/does some things well with data

- **Most high level paper documents from historic shots were preserved.**
  - Most results data were preserved (films)
  - We have an active archival effort (WRS)
  - Culture of recording data
- **Culture has reverence for data when answering important problems**
- **When I got to LANL we were told to preserve notebooks**
  - Notebooks are provided! (your own personal repository)
  - *Have saved multiple experiments, use a notebook*
  - Probably mostly useless for others to read, but that's okay



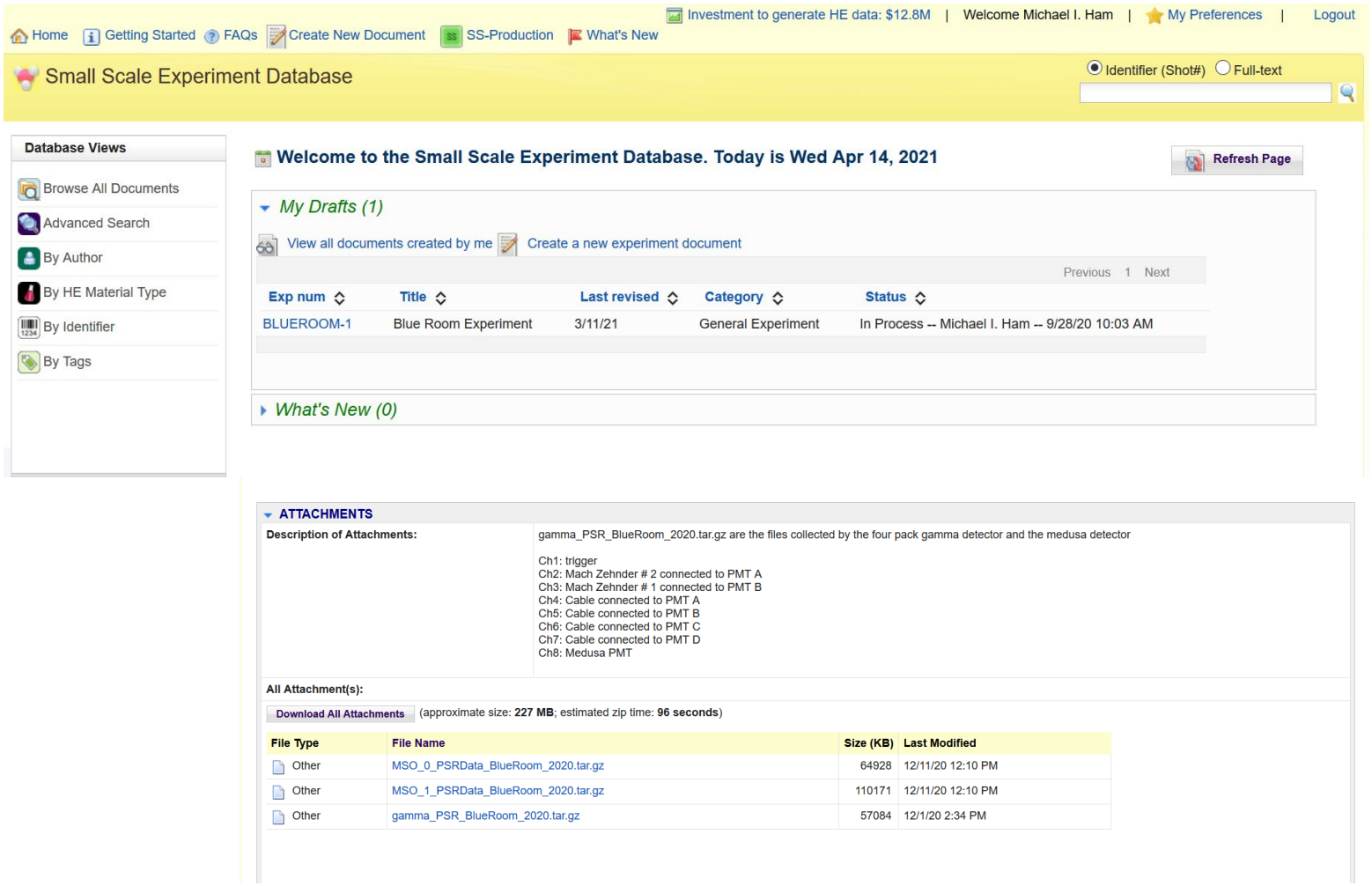
LANL does some things badly with data

- **Some historic data was deemed unimportant and discarded after testing**
  - Cables
- **Archival efforts tend to be extremely ad-hoc**
- **Institutional data repositories are not well known and not user friendly**
  - No institutionally accepted way to archive your digital data for use by the laboratory, it's up to you and your team/group/division.
    - That has some advantages (flexibility)
    - But also disadvantages in that the data are everywhere and nowhere



https://int.lanl.gov/computing/data-servers/central-storage/storage-types.shtml

Making data available to the future



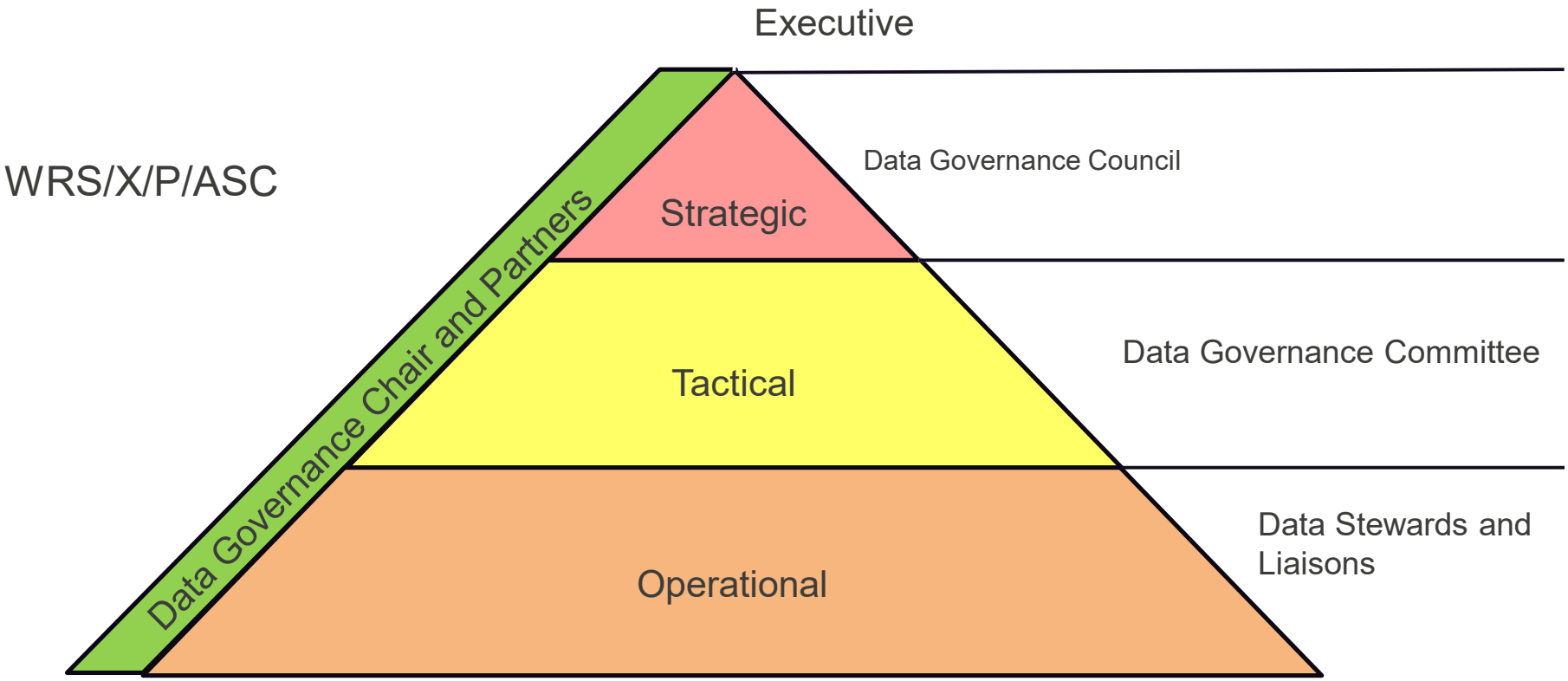
http://smallscale-y.lanl.gov

What am I Currently doing?

- **Assisting in updating internal digital archives**
- **Storing Data in the Small Scale Data Base (SSDB)**
  - Blue Room data (yellow)
  - MIE scattering data (yellow)
  - UGT data (red)
  - Surface Imaging Data?
- **Working directly with X-division to put data with pedigree into the Common Modelling Framework (CMF)**
  - Not complete agreement that this is where it should go, but it does work and is simple to implement.
- **Assisting in Establishing Data Governance Body with WRS**

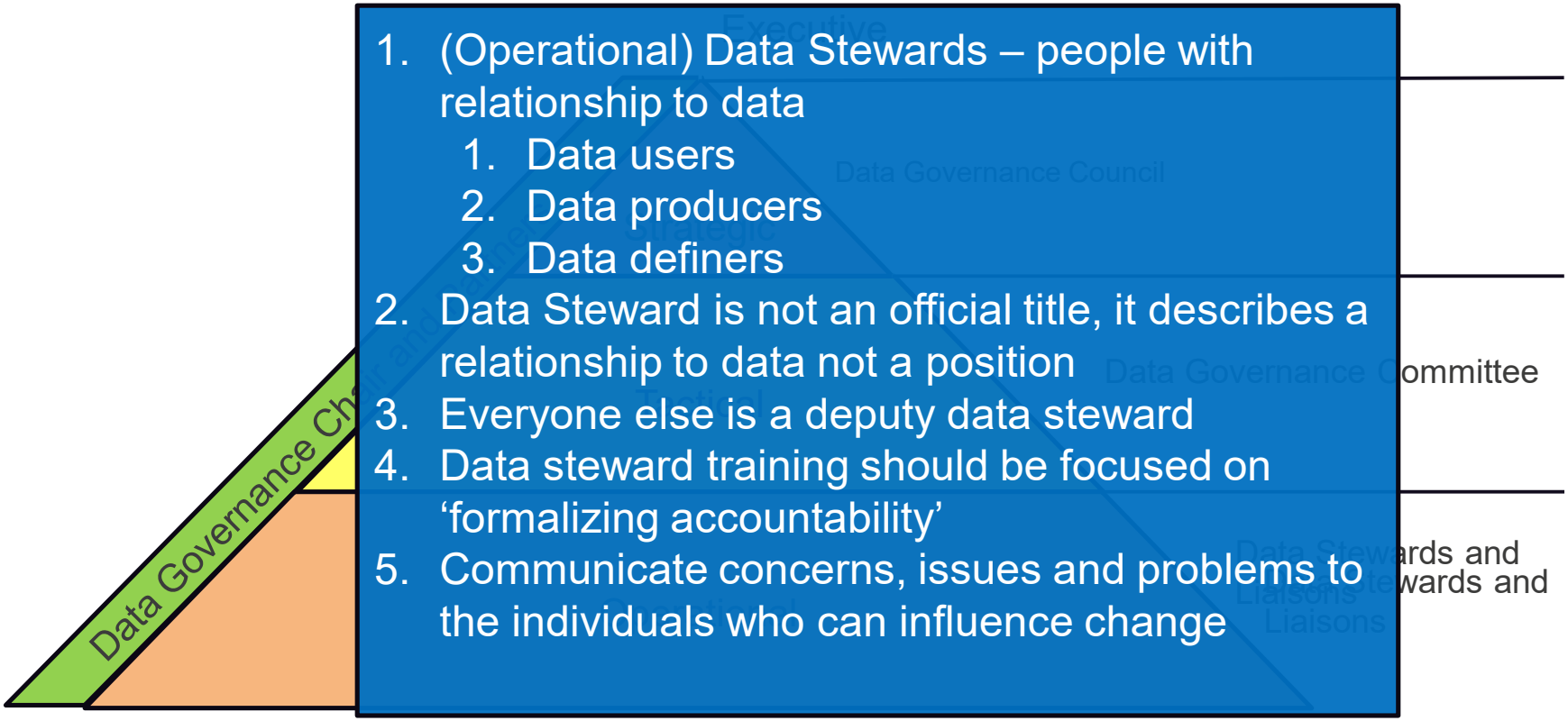
Data Governance Body

Roles and Responsibilities



Data Governance Body

Roles and Responsibilities



1. (Operational) Data Stewards – people with relationship to data
    1. Data users
    2. Data producers
    3. Data definers
2. Data Steward is not an official title, it describes a relationship to data not a position
3. Everyone else is a deputy data steward
4. Data steward training should be focused on 'formalizing accountability'
5. Communicate concerns, issues and problems to the individuals who can influence change